

REMARKS

The Applicant has received and reviewed the Office Action dated January 5, 2006 wherein the Office rejected claims 8 and 9 under U.S.C. 102(b) as being anticipated by the reference KR 8902848, the reference of Minami (U.S. Patent No. 3,866,568) or the reference of Takahashi et al. (U.S. Patent No. 5,567,539); rejected claims 8-10 under 102(b) as being anticipated by the reference JP780100390; rejected claims 8 and 9 under U.S.C. 102(b) as being anticipated by the reference JP 78020780; rejected claims 8-10 under U.S.C. 103(a) as being made obvious by the reference JP780100390; rejected claims 8 and 9 under U.S.C. 103(a) as being made obvious by the reference JP 78020780; rejected claims 8 and 9 under U.S.C. 103(a) as being unpatentable over KR 8902848 in view of the reference of Oehler et al. (U.S. Patent No. 5,820,927); rejected claims 8-10, and 12 under U.S.C. 103(a) as being unpatentable over KR 8902848/JP 780100390/JP 78020780 in view of the reference of Rosenblatt (U.S. Patent No. 6,365,169); and rejected claim 10 under U.S.C. 102(b)) as being anticipated by the reference JP78020780.

Rejection under 35 U.S.C. 102(b) to KR 8902848, Minami, or Takahashi et al.

Applicant's method claims 8 and 9 stand rejected under 35 U.S.C. 102(b) as being anticipated by the reference KR 8902848, the reference of Minami (U.S. Patent No. 3,866,568) or the reference of Takahashi et al. (U.S. Patent No. 5,567,539). The Applicant respectfully disagrees with the Office's aforementioned rejection of Applicant's method claims 8 and 9.

In regards to Applicant's independent method claim 8, Applicant's independent method claim 8 calls for a method of applying a water treatment composition to an article including the step of:

“...applying a metal ion yielding material in particle form to the adhesive on the web” (Emphasis added.)

The Applicant respectfully submits that a review of the references of Minami and Takahashi et al. reveal that the references of Minami and Takahashi et al. each do not teach the step of applying metal ion yielding materials in particle form to an adhesive on a web.

In regards to the reference KR 8902848, the Office on page 4, lines 5-14 stated:

“In contrast to Applicants argument, both copies of the translated text of KR 8902848 (obtained from the Applicants and the Office) show that KR 8902848 teaches that one side of the non-woven fabric 11' and 11'' (i.e. either upper side 11' or lower side 11'') is coated with an adhesive, and the adhesive-coated side is fusion bonded to silver-added activated carbon 12' or untreated 12''” (See e.g. Translation obtained from the Applicants, page 4, lines 20-21). KR 8902848 teaches also that the silver-added activated carbon 12' and untreated 12'' are alternately arranged between the upper and lower non-woven fabrics 11' and 11''. Therefore, KR 8902848 includes teaching that one side of the lower non-woven fabric 11' and 11'' is fusion bonded to the silver-added activated carbon 12' because KR 8902848 does not limit its teaching to bonding only untreated carbon.” (Emphasis added.)

The Applicant respectfully submits that the disclosure of the fusion bonding of activated carbon to a side of KR 8902848's non-woven fabric containing an adhesive coating does not anticipate the Applicant's step of applying of metal ion yielding material in particle form to the adhesive as called for in Applicant's independent method claim 8. It is submitted that the reference of KR 8902848 is unclear whether the activated carbons are fusion bonded to the adhesive or the non-woven fabric itself. The Applicant respectfully

notes that the Office is currently rejecting Applicant's claims 8 and 9 under 35 U.S.C.

102(b) as being anticipated by the references KR 8902848. In *ATD Corp. v. Lydall, Inc.*, the Federal Circuit held that in order for a reference to anticipate, the :

“... anticipating reference must describe the patented subject matter with sufficient clarity and detail to establish that the subject matter existed and that its existence was recognized by persons of ordinary skill in the field of the invention.”¹

In view of *ATD Corp. v. Lydall, Inc.*, the Applicant respectfully submits that the KR 8902848 reference does not anticipate Applicant's independent claim 8 as the reference KR 8902848 does not describe with sufficient clarity and detail the use and function of the adhesive so as to anticipate the step of “...applying a metal ion yielding material in particle form to the adhesive on the web” of Applicant's independent method claim 8.

In regards to the KR 8902848 reference's disclosure of the adhesive, the Applicant respectfully submits under *In re Oelrich*² that the mere disclosure of an adhesive coating the inner side of the nonwoven fabrics is not sufficient to lead to the conclusion that the silver-added active carbon and untreated active carbon of the KR 8902848 reference are actually applied to the adhesive. Note per the Applicant's above argument that the KR 8902848 reference actually teaches away from the application of the active carbons to the adhesive through the disclosure that the mesh formed by KR 8902848's fabrics 11' and 11'' already functions to prevent the active carbon from escaping or releasing from KR 8902848's filter 8.

¹ *ATD Corp. v. Lydall, Inc.*, 48 USPQ 2d 1321, 1328 (Fed. Cir. 1998)

² *In re Oelrich*, 212 USPQ 323, 326 (C.C.P.A.) (quoting *Hasggir v. Kemmer*, 40 USPQ 665, 667 (C.C.P.A. 1939) (“Inherency, however, may not be established by probabilities or

In further regards to KR 8902848, note that although the reference KR 8902848 (in the abstract) discloses in parentheses that the inner side of the nonwoven fabrics is coated with adhesive, the Applicant respectfully submits that the adhesive cited in KR 8902848 is for bonding KR 8902848's sheets of fabrics 11' and 11'' together to prevent the sheets of fabrics 11' and 11'' from blistering. (See page 4 of the Applicant's translation of the KR 8902848 reference, a copy of which was previously submitted with the Office.) The Applicant further submits that the KR 8902848 reference teaches away from the use of an adhesive to secure the silver-added active carbon and untreated active carbon to fabrics 11' and 11'' through the disclosure on page 4, lines 24-26 of the Applicant's translation of the KR 8902848 reference that:

“... the mesh of the fabrics is finer than the activated carbon, which thereby is prevent from being release.”

In view of KR 8902848's above disclosure, the Applicant respectfully submits that there lacks a need for securement of the silver-added active carbon and untreated active carbon to KR 8902848's fabrics 11' and 11'' as the mesh formed by fabrics 11' and 11'' already functions to prevent the silver-added active carbon and untreated active carbon from escaping or releasing from filter 8. (See Figures 3, 4, 5, and 6 of the KR 8902848 reference.)

possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.”

It is for the above reasons that the Applicant submits that Applicant's independent method claim 8 is allowable over the reference KR 8902848, the reference of Minami and the reference of Takahashi et al.

Rejection under 35 U.S.C. 102(b) to JP 78020780

Applicant's claims 8 and 9 call for a "... method of applying a water treatment composition to an article ..." including the step of:

"... allowing the adhesive to dry to secure the metal ion yielding material to the web of material."

On page 3, lines 1-3 of the Office Action dated January 5, 2006, the Office rejected Applicant's claims 8 and 9 under U.S.C. 102(b) as being anticipated by the reference JP 78020780. In support of the Office's aforementioned rejection, the Office on page 5, lines 1-7 stated:

"As to (i), JP 78020780 discloses a sterilizing element for water purification apparatus (claimed filter) comprising adhering a water-soluble silver salt containing powder to a flexible film with a **epoxy resin** binder (See Abstract). It is well known in the art that resins can be formulated either as water based or as solvent based. In both cases the epoxy resin binder should be dried to secure powder to the plate. The specification as filed also describes the use of **epoxy resin** as an adhesive, which supposed to be dried to secure metal ion yielding particles (See page 6, line 9)."

The Applicant respectfully disagree with the Office's above statement. Referring to the abstract, note that JP 78020780 does not call for the drying of JP 78020780's binder in order to adhere JP 78020780's sintered powder to JP 78020780's base plate. It is also noted that although the Applicant's specification describes the use of epoxy resin as an adhesive(see page 6, line 9), the Applicant's specification teach, on page 6, line 9, the

drying of the epoxy resin to secure metal ion yielding particles. It is for the aforementioned that the Applicant submits that the reference of JP 78020780 does not teach the step of "... allowing the adhesive to dry to secure the metal ion yielding material to the web of material ..." as called for in Applicant's claims 8 and 9.

On page 5, lines 8 and 9 of the Office Action dated January 5, 2006, the Office stated:

"The Examiner Note: adhesive of any kind should be dried (cooled, cured), as evidence by JP 51067462 (See abstract) or solvent removing to secure an object to a substrate." (Emphasis added.)

The Applicant strenuously objects to the Office's use of the term "dried" as being interchangeable with the terms "cooled" and "cured." It is submitted for example that the "curing" or "cooling" of a substance may not be related or involve the "drying" of a substance.

Applicant's claim 10 calls for a "... method of applying a water treatment composition to an article ..." including the step of:

"...applying the water treatment material to the adhesive on said solid structure..." (Emphasis added.)

On page 3, lines 10-12 of the Office Action dated January 5, 2006, in support of the Office's rejection of Applicant's claim 10 under U.S.C. 102(b) as being anticipated by the reference JP 78020780, the Office stated:

"As to (ii), there are only two possible ways to adhere powder to a plate using adhesive: (1) to apply powder to the coated adhesive or (2) mix the powder with the adhesive and then apply the mixture to the plate."

The Applicant respectfully submits that the Office's above statement does not support the Office's rejection of Applicant's claim 10 as being anticipated by the reference JP 78020780. Note that JP 78020780 teaches the simultaneous application of the sintered powder and the adhesive to the base plate through JP 78020780's disclosure of "...adhering the sintered powder to a base plate (e.g. flexible film) with binder (epoxy resin). (Emphasis added, see JP 78020780's abstract.) That is, JP 78020780's binder is not applied to JP 78020780's flexible film before the sintered powder is applied to the binder. The Applicant submits that JP 78020780's simultaneous application of the sintered powder and the adhesive to the base plate is different from the step of "...applying the water treatment material to the adhesive on said solid structure..." as called for in Applicant's method claim 10. (Emphasis added.)

It is for the above reasons that the Applicant respectfully submits that Applicant's claims 8-10 are allowable over the JP 78020780 reference.

Rejection under 35 U.S.C. 102(b) to JP 78020790

Applicant's claims 8 and 9 calls for a "... method of applying a water treatment composition to an article ..." including the step of:

"...forming the particle containing web into an article for use in water purification."

On page 2, lines 22-24 of the Office Action dated January 5, 2006, the Office rejected Applicant's claims 8- 10 under U.S.C. 102(b) as being anticipated by the reference JP

780100390. In support of the Office's aforementioned rejection, the Office on page 5, lines 13-15 of the Office action stated:

"JP 780100390 expressly teaches sterilizing element for water purification (See title). The Examiner agrees that the abstract of JP 780100390 does not teach claimed resin."

The Applicant submits that the reference JP 780100390 does not teach the above-mentioned limitation of Applicant's claims 8 and 9. Note that although JP 780100390's abstract teaches a resultant product comprising a sterilising element, JP 780100390's abstract is silent on how the sterilising element is used once it is formed, i.e. whether it is just placed in a water purification article or actually shaped or formed into a water purification article.

As the Applicant previously cite, in *ATD Corp. v. Lydall, Inc.*, the Federal Circuit held that in order for a reference to anticipate, the :

"... anticipating reference must describe the patented subject matter with sufficient clarity and detail to establish that the subject matter existed and that its existence was recognized by persons of ordinary skill in the field of the invention."³

In view of *ATD Corp. v. Lydall, Inc.*, the Applicant respectfully submits that the JP 780100390 reference does not anticipate Applicant's claims 8 and 9 as the JP 780100390 reference does not describe with sufficient clarity and detail on how the sterilising element is used once it is formed, i.e. whether it is just placed in a water purification article or actually shaped or formed into a water purification article.

It is for the above reasons that the Applicant respectfully submits that Applicant's independent claims 8 and 10 is allowable over the JP 780100390 reference.

**Rejection under 35 U.S.C. 103(a) to combination of the references
of KR 8902848, JP 780100390, or JP 78020780 and Rosenblatt**

Applicant's independent claims 8 and 9 calls for a method of applying a water treatment composition to an article including the step of "... applying a metal ion yielding material in particle form to the adhesive on the web..." and the step of "... allowing the adhesive to dry to secure the metal ion yielding material to the web of material." (Emphasis added.)

Applicant's independent method claim 10 calls for a method of making an article for insitu water treatment including the step of:

"... applying the water treatment material to the adhesive on said solid structure; allowing the adhesive to set to thereby secure the water treatment material to the solid structure;" (Emphasis added.)

On page 3, lines 7-9 of the Office Action dated January 5, 2006, the Office rejected Applicant's claims 8-10 under U.S.C. 103(a) as being unpatentable over KR 8902848/JP 780100390/JP 78020780 in view of the reference of Rosenblatt (U.S. Patent No. 6,365,169). In support of the Office's aforementioned rejection, the Office on page 6, lines 1-3 stated:

"Rosenblatt teaches curing (setting) of his PVA with iodine and other antimicrobial components in order to secure the iodine and other antimicrobial components to Rosenblatt's substrate (See column 8, lines 9)."

³ *ATD Corp. v. Lydall, Inc.*, 48 USPQ 2d 1321, 1328 (Fed. Cir. 1998)

The Applicant respectfully but strenuously disagrees with the Office's position that using PVA, taught by Rosenblatt, as an adhesive in KR 8902848 and Minami or Takahaski et al would make Applicant's claims 8-10, and 12 obvious.

The Applicant respectfully notes that the reference of Rosenblatt does not call for the application of iodine, which Rosenblatt uses as a disinfectant, to the PVA locate on Rosenblatt's substrate in particle form. Rosenblatt instead teaches the "complexing" of iodine in solution or liquid form to Rosenblatt's substrate. (See column 3, lines 43-45 of Rosenblatt.) The Applicant respectfully submits that the application of iodine to a substrate in particle form is different from the "complexing" of iodine to a substrate in solution or liquid form.

The Applicant also submits that using PVA, as taught by Rosenblatt, in KR 8902848 and Minami or Takahaski et al. as an adhesive does not make the above mentioned limitations of Applicant's claim 8-10 obvious as the reference of Rosenblatt does not call for the drying or the curing of his PVA with the iodine applied thereto in order to secure the iodine to Rosenblatt's substrate. Note that Rosenblatt instead teaches that the PVA is dried and cured to the Rosenblatt's substrate before the iodine is applied thereto. (See column 3, lines 39-45 of Rosenblatt.) More specifically, in column 3, lines 39-45, Rosenblatt states:

"The cured PVA impregnated substrate is washed, if necessary, and is then complexed with iodine solution containing excess iodine. The sponge is rinsed out to flush out the excess iodine."

In regards to the Office statement on page 6, lines 1-3 of the Office Action that Rosenblatt, in column 8, lines 9, teaches "... curing (setting) of his PVA with iodine and other antimicrobial components in order to secure the iodine and other antimicrobial components to Rosenblatt's substrate (See column 8, lines 9)," the Applicant respectfully but strenuously disagree with the Office's interpretation of Rosenblatt's column 8, lines 9.

The Applicant respectfully submits that Rosenblatt's column 8, lines 9-12 does not teach the curing or setting of Rosenblatt's PVA with iodine to Rosenblatt's substrate.

Rosenblatt's column 8, lines 9-12 instead teaches that the curing of Rosenblatt's various substrates provides Rosenblatt's substrates with "...iodine complexing potential, that is (referring back to column 3, lines 43-45 of Rosenblatt) the ability to complex "with an iodine solution containing excess iodine."

It is for the above reasons that the Applicant respectfully submits that Applicant's claims 8-10 is allowable over the references of KR 8902848 and Minami or Takahaski et al in view of the reference of Rosenblatt.

In further regards to Applicant's claims 9 and 12, Applicant's dependent claim 9 depends on Applicant's independent claim 8 and Applicant's dependent claim 12 depends on Applicant's independent claim 10. Since Applicant's independent claim 8 and Applicant's independent claim 10 are allowable for the reasons given above, Applicant's dependent claims 9 and 12 should also be allowable.

In view of the above, it is submitted that the application is in condition for allowance.

Allowance of claims 8-10 and 12, as amended, is respectfully requested. Applicant has enclosed a version of the amendment showing changes made with this response.

Please note that the Applicant has enclosed an executed PTO/SB/30 transmittal form for the filing of a request for continued examination of the above-identified application under 37 C.F.R. 1.114 so that the present response along with additional references cited in an enclosed information disclosure statement may be entered for consideration. Also enclosed is a credit card authorization form in the amount of \$395.00 in payment of the filing fee for the request for continued examination and copies of the references cited in the information disclosure statement.

Respectfully submitted,

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Enclosure



VERSION OF AMENDMENTS SHOWING MARKINGS

In the Claims

1 - 7. (Canceled)

8. (Previously Presented) A method of applying a water treatment composition to an article comprising the steps of:

- a) applying an adhesive to a web of material;
- b) applying a metal ion yielding material in particle form to the adhesive on the web;
- c) allowing the adhesive to dry to secure the metal ion yielding material to the web of material; and
- d) forming the particle containing web into an article for use in water purification.

9. (Original) The method of claim 8 wherein the particle containing web is formed into a filter.

10. (Original) A method of making an article for insitu water treatment comprising the steps of:

selecting a water treatment material from the group consisting of zinc sulfate, zinc carbonate, zinc chloride, copper chloride, copper carbonate, copper sulfate, silver chloride, stannous chloride and stannic chloride;

selecting an adhesive from the group consisting of polyurethane, epoxy resin, polyvinyl acetate and polyvinyl alcohol;

selecting a water insoluble solid structure;
applying the adhesive to the water insoluble solid structure to form at least a partial coating thereon;
applying the water treatment material to the adhesive on said solid structure;
allowing the adhesive to set to thereby secure the water treatment material to the solid structure; and
forming the structure into an article for placement into a body of water to thereby enable the structure to adhesively support the water treatment material thereon in a condition that maintains a water concentration of metal ions less than 1000 parts per billion (ppb).

11. (Withdrawn)

12. (Original) The method of claim 10 wherein the selected adhesive is sprayed on the solid structure and the selected water treatment material is applied to the adhesive on the structure.

13 -20. (Withdrawn)